

state for fifty years, when it was found in Newfane. Since then it has been reported in several other places, but is still very rare. It was found quite plentiful in Newfane three years ago. Last year there were only a few plants, and this summer I have been unable to find one. I wish you would watch your station and see if you have the same experience with it." The observers at this station were Mr. Howe and Dr. A. J. Grout, whose homes were in that town.

Aug. 16, 1899, the day following that on which Mr. Harvey found it in Maine, the writer found a single plant in a rotten stump in Westminster, about ten miles east of Newfane. On Aug. 24 and on subsequent days, I found it quite abundant in a small wood-lot in Putney, less than a quarter of a mile from the first station. It grew in little hollows, the white, oblong tubers being in rotten wood or decayed leaves. Enough plants were found to have furnished specimens for all the botanists in New England, but of the few saved, most were thrown away, as they did not dry well, and it was planned to make careful collections the next year. Last year, however, and this, vain search has been made for this plant in the hollows where it was so plenty in 1899.

Reports from other stations are desirable. Does it thus disappear wherever found? Has any one ever carefully studied it? It seems to need very careful marking if it appears but once in a generation or two of "mortal men." Let those who find it spread the good news and make the most of their discoveries. It seems to be a case of "now or never." Efforts at artificial propagation might be successful in the hands of those who are skillful in the handling of bulbs. — W. H. BLANCHARD, Westminster, Vermont.

VOLVARIA VOLVACEA IN LAWRENCE, MASSACHUSETTS.

FRANCIS H. SILSBEE.

ON August 5, 1901, a friend brought to me some specimens of fungi which were readily identified from the conspicuous volva, pinkish or salmon-colored gills, and absence of collar, as belonging to the genus *Volvaria*. A visit to the place where they were found revealed a large bed of them. In a dumping ground belonging to the Pacific Mills, Lawrence, a large amount of soiled cop and roving

waste, together with bits of rags and paper, more or less mixed with night soil, occupied a space of about one hundred square feet. The pile was perhaps two feet deep. This heap was almost covered with the fruit, which grew in great luxuriance in clusters of from three to five each, the groups being perhaps a foot or so apart. As they grew on such a loose, soft material it was very easy to secure specimens in all stages of development, from the closed volva up to the fully mature fruit. I did not notice any specimens where the cap was fully expanded so as to be really plane. While still somewhat conical, or broadly umbonate, the pilei would become wrinkled or crépy, and have a wilted appearance. On consulting Stevenson's British Hymenomycetes, I found that the species was undoubtedly *V. volvacea*. His description, which is that of Fries with dimensions added, is as follows:—

“Pileus 7.5 cent. (3 in.) broad, rarely more, cinereous, black-streaked with appressed fibrils, campanulate, then expanded, obtuse. Stem 7.5–12.5 cent. (3–5 in.) long, 12 mm. ($\frac{1}{2}$ in.) thick, white, solid, somewhat equal; volva lax. Gills free, flesh-colored. In stoves [hot-houses], roadsides, etc. Rare. July–Aug.”

From careful observation of the bed referred to, this description might be amplified thus:—

“Pileus 3–6 in. broad; (very few were less than 3 in. and many were 5 or 6 in.); when first emerging from the volva almost black, and under a lens somewhat fibrillose-tomentose. As the pileus expands it becomes paler, and streaked with black, appressed fibrils, though the disk remains dark. The older pilei become broadly umbonate and striated, and in some cases almost sulcate, especially on the margin. There seemed, also, a general tendency for the pileus, even before expanding, to split at the disc, usually into quite regular quarters, the split often extending partly down the stem. The margin in the expanded caps, also, was frequently split. Stem silky-fibrillose, solid, white without and within, expanded into a bulb at base, and connected with the volva, central but frequently curved, probably owing to the irregular shape of the heap of material. When growing out of the side of a little mound, the stem would curve upward, to bring the pilei horizontal. Gills free, white at first, becoming pink or flesh-colored, and finally almost salmon-colored; rather close, of various lengths. Flesh white, rather thin; taste mild and rather pleasant, although the fruit all had a strong odor. Volva white below,

blackish brown above, rupturing quite regularly along a middle zone the upper half adhering to pileus, but breaking up into two or three large pieces as the cap expands, and soon falling off. The lower part of the volva remains large and loose, with a very free margin, though somewhat appressed. Volva white within.

The growth of these fungi was much affected by weather. After a rain they would develop from the button stage to maturity in about two days. Dry, hot weather with bright sunshine seemed to retard the rapidity and luxuriance of growth, specimens then also being smaller. The bed on which they grew was quite warm slightly below the surface, showing that rapid decay of the mass was taking place.

The spores were smooth, oval, somewhat pointed at one end, and about 8 to 9×5 to 6μ , (6 to $8 \times 3\frac{1}{2}$ to 4 , Masee). When collected in a mass on paper they were of a rusty salmon color.

At this writing, Aug. 18th, the bed is still bearing.

LAWRENCE, MASS.

REMARKS ON VOLVARIA.

HOLLIS WEBSTER.

MR. Silsbee's observations on *Volvaria volvacea* furnish a peg on which to hang a few notes about the genus, which may be acceptable to readers who have gone no farther in the study of toadstools than to safeguard themselves by learning the characteristics of the poisonous Amanitas. For a Volvaria is much like an Amanita, and would surely be classed as one by a tyro in whose mind the image of the wrapper or volva has temporarily obscured such things as veils and rings, or the color of spores. Indeed the volva is more conspicuous in Volvaria, as a rule, than in any Amanita except *A. caesarea*, in which, as in the larger Volvarias, it consists of a large, fleshy bag that can not possibly escape notice. From the prominence of this wrapper the genus takes its appropriate name. Unlike Amanita, Volvaria has no partial veil, and hence no ring on the stem. In this, Volvaria is like Amanitopsis. But whereas both the ringed Amanita and the ringless Amanitopsis produce white spores, Volvaria spores are pink or flesh-colored. The same tint is usually to be seen in the gills,